

### REMARKS

Claims 1-7 are pending in the application. These claims were rejected under 35 U.S.C. §112, first and second paragraph, as lacking enabling disclosure and being indefinite.

5 Applicants have amended claims 1, 2 and 4-7, amended the drawing figure, and provided an associated clarifying explanation.

Applicants' use of reference characters or exemplary description below is for illustrative purposes only and is not intended to be limiting in nature unless explicitly indicated.

10 **35 U.S.C. §112, ¶¶1, 2, CLAIMS 1-7 LACK OF ENABLEMENT AND INDEFINITENESS**

*1. Applicants, via the above amendments to the claims, amendments to the drawing, and the description below, have clarified the key components of the invention and illustrated how these aspects are enabled.*

In the OA, the Examiner rejected claims 1-7 as lacking enablement under  
15 35 U.S.C. §112, first paragraph, and as being indefinite under 35 U.S.C. §112, first paragraph.

Regarding the 35 U.S.C. §112, second paragraph, rejection, Applicants have amended the claims to correct the antecedence problems noted in lines 1-2 of claim 1, and have further changed all instances of the term "calculation device"  
20 to "calculation unit" for consistency in claim language, as suggested by the Examiner.

As to the 35 U.S.C. §112, first paragraph, rejection, Applicants address each of the issues raised by the Examiner as follows.

5 The input signals for the synchronous system and the advanced calculation unit are disclosed in the application as "asynchronous events". The first paragraph on p. 4 of the Specification indicates that these asynchronous events are utilized by the synchronous system, but are first preceded by synchronizing circuitry, such as a flip-flop. This description has been clarified in the drawing amendments, and support is provided in this first paragraph on p. 4. Applicants therefore believe that no new matter has been added.

10 Thus, when the term "calculated in advance" is used, the reference is with respect to the synchronous system, since the signal is delayed prior to (i.e., waiting for the clock signal) arriving at the synchronizing circuitry. Since there is no such delay from the perspective of the advanced calculation unit, it is thus able to begin its calculations immediately upon receipt of the asynchronous  
15 event. Advantageously, it can have the output value calculated before the synchronous system can have its output value calculated.

As to the control signal C for the switching device, the control operates the switching device to utilize the output of the advanced calculation unit E1 prior to the synchronous system providing its output at E2, and to utilize the output of the  
20 synchronous system E2 after its calculation. The triggering of the control C to use the output E1 could occur either upon completion of the calculation by the advanced calculation unit or possibly upon arrival of the asynchronous event at the input of the synchronous system; other timings for the switching are also

possible—claim 1 is broadly construed in this manner. The triggering of the control C to use the output E2 is done once the synchronous system has completed its calculation. One of ordinary skill in the art would understand how to produce such a control signal based on these criteria. This scheme permits a very rapid system response.

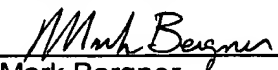
5 Applicants believe that these clarifying amendments fully address the Examiner's 35 U.S.C. §112 rejections, and invite the Examiner to contact the Applicants' representative if further clarification is required.

Applicants further request that the correct U.S. Patent No. 5,168,564 (incorrectly designated on the PTO-1449 form submitted) as pointed out by the Examiner be listed on  
10 the Notice of References cited. Applicants thank the Examiner for pointing out this error.

#### CONCLUSION

Inasmuch as each of the objections have been overcome by the amendments, and all of the Examiner's suggestions and requirements have been satisfied, it is respectfully requested that the present application be reconsidered, the rejections be  
15 withdrawn and that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

 (Reg. No. 45,877)  
20 Mark Bergner  
SCHIFF HARDIN, LLP  
PATENT DEPARTMENT  
6600 Sears Tower  
Chicago, Illinois 60606-6473  
(312) 258-5779  
25 Attorney for Applicants  
Customer Number 26574